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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,718	12/14/2001	Hideshi Hattori	CU-2727 RJS	8050
26530	7590	01/21/2004	EXAMINER	
LADAS & PARRY 224 SOUTH MICHIGAN AVENUE, SUITE 1200 CHICAGO, IL 60604			DICUS, TAMRA	
			ART UNIT	PAPER NUMBER
			1774	
DATE MAILED: 01/21/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/018,718

Applicant(s)

HATTORI, HIDESHI

Examiner

Tamra L. Dicus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6,12,14,16,18,20 and 22-29 is/are pending in the application.
- 4a) Of the above claim(s) 22-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,12,14,16,18 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The Examiner acknowledges cancellation of claims 2, 7-11, 13, 15, 17, 19, and 21. The prior rejections are withdrawn due to Applicant's amendments.

#### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A layer formed by two layers is confusing. Applicant includes language such as "wherein the fine particle layer is formed by at least two layers", which is confusing as to if there is one layer or two layers.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4,957,816 to Adkins.

Adkins teaches a polymeric substrate coated with an electroconductive layer. A polyelectrolyte film is on a transparent substrate such as transparencies with surface friction anti-blocking and abrasion resistance having a deposited particles such as particulate silica and epoxy resin. See col. 5, ll 45-40 and col. 6, l 35. Adkins teaches polymeric electrolytes

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comprise electroconductive polymers which may cross-linked. See col. 2, ll 35-60 and col. 5, ll 24-30. See also Example 1. To instant claim 5, Adkins provides for further adhesion means col. 4, ll 50-66. The same materials are provided; therefore, the electrostatic interaction is inherently present.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 5-6, 12, 14, 16, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,957,816 to Adkins in view of USPN 6,106,948 to Wang et al.

Adkins is relied upon above. While Adkins provides for the particle make-up of polymers (epoxy) and silica at col. 5, ll 57-60, Adkins does not explicitly define the thickness or particle size as per instant claims 12 and 14. However, particle size and thickness are merely optimizable features and an obvious modification. It would have been obvious to one of ordinary skill in the art to modify since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. Particle size and thickness effects coverage area.

Adkins does not explicitly define the volume percent or refractive index of the fine particle layer as per instant claims 18 and 20. However, they are result effective variables and as such are optimizable features. It would have been obvious to one of ordinary skill in the art to modify since it has been held that discovering an optimum value of a result effective variable

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involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. Volume percent and refractive index effects light transmission.

5. Adkins does not provide for the multilayered polyelectrolytes or the reinforcing means as per instant claims 3, 5, and 6. Wang provides a nonlinear optical structure and methods for making. The structure includes a substrate having multilayers of polymer electrolytes by deposition. See col. 3, ll 30-40, and col. 4, ll 13-25 and ll 44-50. Wang discloses the ionic attraction that exists. It would have been obvious to one of ordinary skill in the art to modify the polymeric substrate of Adkins to further include multiple layers of polymer electrolytes as suggested by Wang because the ordered arrangement provides non-linear optical macroscopic polarization and large effects and prove to be more stable as explained by Wang at col. 3, ll 7-25 are inherently present as the same materials and process (deposition) is provided by the prior art.

6. Regarding instant claim 16, Adkins does not teach an additional particle layer over the one Adkins already provides for. However, an additional particle layer would have been obvious to include because one skilled in the art of deposition would be inclined to reproduce this additional layer because the layer is formed by various deposition techniques such as dipping or deposition.

#### ***Response to Arguments***

7. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Wang is still used in the rejection to provide for the multilayer polyelectrolytes.

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***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

January 8, 2004

Tamra L. Dicus  
Examiner  
Art Unit 1774



BRUCE H. HESS  
PRIMARY EXAMINER